

BEFORE THE
POSTAL REGULATORY COMMISSION
WASHINGTON, D.C. 20268-0001

**INQUIRY CONCERNING SERVICE
PERFORMANCE MEASUREMENT DATA**

Docket No. PI2016-1

**RESPONSES OF THE UNITED STATES POSTAL SERVICE
TO QUESTIONS 1 THROUGH 5
OF CHAIRMAN'S INFORMATION REQUEST NO. 1**

The United States Postal Service hereby files its responses to Chairman's Information Request No. 1 on April 25, 2016. The questions are stated verbatim and are followed by the responses.

Respectfully submitted,

UNITED STATES POSTAL SERVICE

By its attorneys:

Anthony F. Alverno
Chief Counsel, Global Business & Service
Development

B. Jeff Meadows III
Michael T. Tidwell
Susan J. Walker

475 L'Enfant Plaza West, S.W.
Washington, D.C. 20260-1135
(202) 268-2997; Fax -5402
May 3, 2016

**RESPONSE OF THE UNITED STATES POSTAL SERVICE
TO CHAIRMAN'S INFORMATION REQUEST NO. 1**

1. Please provide the following percentages, annually and quarterly, for First-Class Mail, Standard Mail, Periodicals, and Package Services, disaggregated to the finest reporting level available for FY 2012 through FY 2015 and quarters 1 and 2 of FY 2016:
 - a. Percent of mail in measurement;
 - b. Percent of mail entered at Full-Service Intelligent Mail barcode (IMb) prices and included in measurement; and
 - c. Percent of mail processed as Full-Service IMb, but excluded from measurement.

RESPONSE

a-c. Please see the corresponding spreadsheets in the attached Excel workbook entitled Attachment.USPS.Response.ChIR1.Q1a-c.

**RESPONSE OF THE UNITED STATES POSTAL SERVICE
TO CHAIRMAN'S INFORMATION REQUEST NO. 1**

2. The following question concerns Docket No. ACR2015, Responses of the United States Postal Service to Questions 1-4, 8, 11, and 13-16 of Chairman's Information Request No. 6, February 3, 2016, question 16. With respect to mail in measurement, the Postal Service has stated that it "does not have data regarding the total volume of mail (measured plus unmeasured), or the total volume of Full-Service mail that was not measured, that have been disaggregated by class, product, and service standard." Please explain the challenges (e.g., technological, methodological, financial, operational) the Postal Service faces in:
- a. Disaggregating the total volume of mail (measured plus unmeasured);
 - b. Disaggregating the total volume of Full-Service IMb mail that was not measured by class, product, and service standard; and
 - c. Disaggregating Full-Service IMb mail volumes below the class level.

RESPONSE

- a. The Postal Service has methods for disaggregating the total volume of mail (measured plus unmeasured) by class and product. These data are captured in the Origin-Destination Information System/Revenue, Pieces, and Weight (RPW) data system and reports. However, ODIS/RPW is not designed to record the service standard applicable to mailpieces for which data are recorded at delivery units. As described in the Docket No. ACR2015 response to Question 8(b) of Chairman's Information Request No. 11, the information required to determine the applicable service standard is not available or self-evident for all mail or each mailpiece. Specifically, mail which is not measured for service performance may not have the required information to determine service standards. The service standard is based on the following elements: Mail Class, Origin ZIP Code, Destination ZIP Code, Start-the-Clock Date, and Entry Point for the applicable entry discount for Standard Mail, Periodicals, and Package Services. For mail that is not in measurement, some of these elements are often

**RESPONSE OF THE UNITED STATES POSTAL SERVICE
TO CHAIRMAN'S INFORMATION REQUEST NO. 1**

RESPONSE to QUESTION 2 (continued)

missing. For example, for commercial mail which is not Full Service Intelligent Mail, mailers are not required to provide electronic documentation manifesting all of the data about the mail. The ODIS-RPW system collects data which makes it possible to generate estimates of mail volumes by service standard for First-Class Mail products. However, approximately 70 percent of the estimated volume of Presort First-Class Mail sampled for ODIS-RPW in FY 2015 was missing the origin ZIP Code, making it impossible to assign a service standard for this portion of the volume.

b. The Postal Service collects detailed mailpiece level data for Full Service mail which enables aggregating the data in a number of ways. The detailed mailpiece level data are retained for 120 days, after which the data are purged from the Seamless Acceptance and Service Performance (SASP) and Business Intelligence Data Store (BIDS) systems due to data storage costs. Data aggregates are retained for longer time periods to support user needs. Current processes aggregate the unmeasured mail by mail class and shape, and when able to be calculated, by service standard. In some cases, mail is excluded from measurement because it is missing an element required for service standard calculation. For example, the start-the-clock date or the entry location may not be available. Without such information, the service standard would be unknown. In case of some exclusion reasons, the service standard may be in question or may not exist. Another example would be a case in which the mail entry location indicated by the mailer in electronic documentation (Merrifield VA P&DC)) does

**RESPONSE OF THE UNITED STATES POSTAL SERVICE
TO CHAIRMAN'S INFORMATION REQUEST NO. 1**

RESPONSE to QUESTION 2 (continued)

not match the location of mail acceptance (Richmond VA P&DC). Current aggregation of the mail not in measurement does not capture the data fields needed to categorize Standard Mail products or Periodicals Products.

Specifically, the rate category is required in order to ascertain the Standard Mail product and the In-County indicator is required to determine the Periodicals product. These data fields are available at the detailed mailpiece level and are generally not populated, except for small volume mailings for which, in order to limit the burden on mailers, the Postal Service does not require mailpiece-level electronic documentation. These small volume mailings for which the documentation requirements do not support product categorization represented less than one percent of Standard Mail and Periodicals mail in measurement in FY 2015.

c. If the question is about the challenges of disaggregating Full-Service IMb measured mail volumes at the class, product, and service standard levels, the only challenge is for the small volume mailings for which the documentation requirements do not support product categorization for Standard Mail and Periodicals described above in response to part b. Detailed mailpiece level data for measurement eligible pieces are aggregated to support quarterly service reporting needs, which include district level in addition to mail, class, product, and service standard.

**RESPONSE OF THE UNITED STATES POSTAL SERVICE
TO CHAIRMAN'S INFORMATION REQUEST NO. 1**

3. Please explain how the Postal Service could overcome the challenges listed in its response to question 2, including the resources or operational changes that would be required.

RESPONSE

The challenge is most significant for the 19.30 percent (FY16 Q2) of mail which is not in Full-Service and not in measurement. Commercial mailers not participating in Full Service provide information about their mailings in postage statements, which provide aggregate data about the volume of mail with sufficient detail for postage assessment. With that information, the mail class and product is available for all commercial mail. However, without requirements for mailers to provide data in more granular detail about the origin location and date of entry of each piece of mail and the destination 3-digit ZIP Code, it is not possible to disaggregate this mail by class, product, and service standard.

One possible solution would be to require the manifest data be provided for all commercial mail. Such a requirement would have enabled more mail to be included in measurement. However, the resolution of Docket No 2013-10 reflects that any proposal to require Full Service IMb for automation discounts has price cap and other implications that require careful consideration. Another potential solution would be to develop a sampling system to collect data about the origin and destination for non-Full Service commercial mail in order to generate volume estimates by class, product, and service standard for this mail. The complexity of such a sampling system focused on a small portion of the mail for the sole purpose of estimating this volume would likely add significant costs to the Postal Service without comparable benefit.

**RESPONSE OF THE UNITED STATES POSTAL SERVICE
TO CHAIRMAN'S INFORMATION REQUEST NO. 1**

RESPONSE to QUESTION 3 (continued)

For mail in Full-Service but not in measurement, a modification to the measurement system could be made to aggregate the detailed mailpiece level data at the class, product, and service standard levels before the detailed mailpiece data are purged. The aggregation process would need business rules to describe how to handle missing or uncertain data in these fields.

For the very small percentage of mail that is in Full-Service and in measurement, but missing the product categorization, three possible options might address the gap. The first option would be to modify the mailing requirements to require all Full-Service mailings, no matter the size, to provide the detailed electronic documentation sufficient to determine product category. Another possible solution is to determine if the electronic information which is provided for these mailings could be used to ascertain if all of the pieces within the mailing can be categorized as the same product. Such a solution would not eliminate the possibility of unknown product category, but might reduce the volume. This approach would require modifications to the postal systems processing the electronic documentation for the purpose of service performance measurement. The third possible solution would be to exclude mail from measurement when it is missing the information needed to properly classify the product.

In FY 2015, only 0.2 percent of Standard Mail letters, 0.05 percent of Standard Mail flats, and 0.4 percent of Periodicals fell into this category. Given the very small volume of mail involved, the potential burden and level of effort involved in either of the first two possible solutions seem to outweigh the benefits. To date,

**RESPONSE OF THE UNITED STATES POSTAL SERVICE
TO CHAIRMAN'S INFORMATION REQUEST NO. 1**

RESPONSE to QUESTION 3 (continued)

the Postal Service has chosen not to exclude this mail from measurement because doing so could introduce a small bias when estimating overall Standard Mail or Periodicals service performance by excluding the small mailings.

**RESPONSE OF THE UNITED STATES POSTAL SERVICE
TO CHAIRMAN'S INFORMATION REQUEST NO. 1**

4. The following question concerns Docket No. ACR2015, Responses of the United States Postal Service to Questions 1-6, 8-10 of Chairman's Information Request No. 11, February 16, 2016, question 8. With respect to mail processed as Full-Service IMb, but excluded from measurement, please confirm that the Postal Service is able to quantify mail volume based on reason(s) for exclusion. If confirmed, please provide the reason(s) for exclusions as a percent of total exclusions for FY 2012 through FY 2016, by quarter. If not confirmed, please explain what the Postal Service would need to provide this information.

RESPONSE

It is confirmed that the Postal Service is able to quantify mail volume based on reason(s) for exclusion, as reflected in the attached Excel spreadsheet entitled Attachment.USPS.Response.ChIR.1Q4.

Although not reflected in the Attachment, mailers entering the Service Performance Measurement process are subjected to a six-week monitoring process to confirm compliance with mail preparation and eDoc requirements. Otherwise, mail also may be subject to exclusion from Service Performance Measurement in response to reports of material defects in mail preparation or entry. Examples include instances in which duplicate container placards are applied to different pallets of mail, or where containers do not arrive on the correct trip or appointment as documented on the PS Form 8125, *Postal Verified Drop Ship Verification and Clearance*, or where trays of mail are not nested within the containers indicated in electronic documentation.

**RESPONSE OF THE UNITED STATES POSTAL SERVICE
TO CHAIRMAN'S INFORMATION REQUEST NO. 1**

5. Please provide the methodologies used to verify accuracy, reliability, and representativeness for each of the following:
- a. External First-Class Measurement;
 - b. Intelligent Mail Accuracy and Performance System;
 - c. International Mail Measurement System;
 - d. Product Tracking System; and
 - e. Seamless Acceptance and Service Performance.

If unable to provide a methodology, please explain.

RESPONSE

a. The External First-Class Measurement System (EXFC) is an externally administered test piece system which has been designed to emulate the First-Class Single-Piece letter, card, and flats mailstream in a representative way that provides accurate national service performance estimates, while maintaining sufficient robustness throughout the system to evaluate postal districts and areas. The system includes test pieces designed to be indistinguishable from other Single-Piece First-Class Mail, so that they can be accepted, processed and delivered by the Postal Service in the normal course of operations without being identified by postal personnel and equipment. The design uses estimates from the historical ODIS/RPW mail population about physical characteristics, and mail flows between ZIP Codes, mailing patterns across days of week, combined with random sampling techniques to create a sampling plan for the quarter which uses a relatively small set of test pieces to estimate the performance of the population of mail. The test pieces are deposited anonymously into collection boxes by a panel of senders who report the time and location of deposit and are received by a panel of households and small businesses who report the delivery

**RESPONSE OF THE UNITED STATES POSTAL SERVICE
TO CHAIRMAN'S INFORMATION REQUEST NO. 1**

RESPONSE to QUESTION 5 (continued)

date. EXFC is designed so that each postal district receives a similar number of test pieces to achieve margins of error for destination quarterly scores within +/-2 percent at 95 percent confidence level for each service standard measured, with the vast majority of scores having margins of error of less than +/-1.5 percent. Quarterly Origin/Destination composite scores, which are weighted averages of performance scores for the district as an origin and as a destination, typically have margins of error within +/-1 percent for most districts. Transit-time measures of performance are based upon a combination of statistical methods and measurement business rules to provide estimates of performance. Care is taken to keep measurement methods and rules consistent during a measurement period so that measures for the period are reliable. When changes do occur, information is provided so that it is clear to the reader what conditions changed since the previous measurement period.

The sample is designed to be representative of key mail characteristics and quality assurance processes have been built to monitor each phase of the measurement process. For example, each test piece is uniquely identified with a number and is inspected during the fabrication process to ensure it is correctly addressed and is bundled accurately for mailing. Throughout each measurement quarter, processes monitor the extent to which the actual data collected follow the sampling plan, with adjustments made as needed. The panels of senders and receivers are trained to provide accurate data or to report that they are uncertain, and their performance is monitored over time through analysis of

**RESPONSE OF THE UNITED STATES POSTAL SERVICE
TO CHAIRMAN'S INFORMATION REQUEST NO. 1**

RESPONSE to QUESTION 5 (continued)

reporting patterns. When necessary, the senders or receivers are retrained or replaced. Data collection systems have been designed to minimize data recording errors by requiring validations of data and by identifying anomalous entries at the time of recording for correction. Quality assurance activities continue following data collection, through the processing of the data where quality assurance processes validate that data are properly maintained. Data reviews and data editing processes identify potentially inaccurate data for correction, verification, or exclusion. Finally, service performance reports are independently reviewed by a quality assurance team prior to their release to the Postal Service.

b. The Intelligent Mail Accuracy and Performance System (IMAPS) is an externally administered hybrid system. It is designed to measure service performance for commercial mail products, which include Presort First-Class Mail, Periodicals, Standard Mail, and Bound Printed Matter Flats. The measurement approach leverages data from postal data systems (primarily Seamless Acceptance and Service Performance) to provide information about the Processing Duration for mail, encompassing the transit-time from the acceptance of mail by the Postal Service through its final automation processing. To measure the transit time from the final automated process to actual delivery of the mail, anonymous receivers scan the IM barcodes on mail they receive. The

**RESPONSE OF THE UNITED STATES POSTAL SERVICE
TO CHAIRMAN'S INFORMATION REQUEST NO. 1**

RESPONSE to QUESTION 5 (continued)

receivers have been selected to be representative across the ZIP Codes within each postal district.

Estimates of the total transit-time are formed using all available Processing Duration data combined with the statistically valid sample of transit-time for Last Mile, resulting in margins of error for destination quarterly performance scores within +/-1 percent at 95 percent confidence levels for Presort First-Class Mail and Standard Mail and +/-2 percent for Periodicals and Bound Printed Matter Flats.

The methodology has been designed to produce accurate and reliable measures of service performance for these products. IMAPS includes a quality assurance review of the Processing Duration data collected and processed in the SASP and BIDS systems. The quality assurance includes random sampling of data records to validate that calculations have been performed correctly, that scan records have been associated correctly, and that aggregations of the mailpieces into groups for performance reporting are accurate. The quality assurance process also includes weekly monitoring of key metrics to identify changes which may indicate data loss or calculation issues. Processing Duration coverage metrics are assessed at the end of each quarter to monitor the extent to which the data in measurement represents the overall population of interest.

Sampling methods are also leveraged in IMAPS because the Last Mile service performance is measured for only a sample of pieces, not a census. Just as

**RESPONSE OF THE UNITED STATES POSTAL SERVICE
TO CHAIRMAN'S INFORMATION REQUEST NO. 1**

RESPONSE to QUESTION 5 (continued)

described for EXFC, quality assurance processes have been designed to validate the accuracy of the data collected. Volunteer receivers scan IMbs on the mail they receive and record the date of delivery. Receiver performance is monitored through weekly reviews to ensure high response rates and accurate reporting, with retraining or replacement as needed. The same data collection system is used as for EXFC. Quality assurance activities are also similar in terms of data review and cleaning as well as independent validation of service performance reports prior to submission.

c. The International Mail Measurement System (IMMS) is designed and operated very similarly to EXFC, with the same sample design methods and measurement processes. Quality assurance processes are nearly identical and are often integrated with EXFC processes. The sample design uses historical data about the international First-Class Mail population, including information about volumes of mail from countries as well as the volumes of international mail flowing between origin ZIP Code areas and the International Service Centers (ISC) for outbound mail and between the ISC and destination ZIP Codes for inbound mail. Just as in EXFC, sampling techniques are used to develop a set of test pieces to represent the mail population being measured. The primary difference from EXFC is that instead of measurement from collection through delivery, IMMS is intended to measure only the domestic leg of the transit-time for international inbound and outbound mail. This means that data are needed to

**RESPONSE OF THE UNITED STATES POSTAL SERVICE
TO CHAIRMAN'S INFORMATION REQUEST NO. 1**

RESPONSE to QUESTION 5 (continued)

identify when the domestic processing begins for inbound mail and when the processing ends for outbound mail. The method for collecting that data is to identify when the domestic processing begins for inbound mail and when the processing ends for outbound mail. The method for collecting that data is to include IMbs on the test pieces and collect the scan data from the postal IMb Tracing system. Quality assurance processes to monitor that test pieces have unique and readable IMbs, and that the critical scan data is available for a sufficient number of test pieces are an integral part of the IMMS system. Just as in EXFC, quality assurance is designed throughout the measurement process from the sample design, fabrication, test piece mailing and receipt processes, data recording, data review, and reporting processes.

d. The Product Tracking System (PTS) records all scan events captured on First Class packages and Standard Mail packages with a trackable service feature. Service performance data and reports are generated on the basis of these scan events. The data captured are replicated from the production PTS system, to the standby system, event for event, for reliability. By doing this, the PTS ensures that data will not be lost, in the event that the production system becomes disabled. Plus, it allows for a system to always be available during any maintenance work. Lastly, the data are passed to the Enterprise Data Warehouse (EDW) which produces the service performance reports. EDW Product Performance Reporting is the reporting tool for PTS data and, in order to

**RESPONSE OF THE UNITED STATES POSTAL SERVICE
TO CHAIRMAN'S INFORMATION REQUEST NO. 1**

RESPONSE to QUESTION 5 (continued)

ensure data accuracy, the EDW system verifies the extracts sent from the PTS system are complete and then applies the appropriate Start-the-Clock and Stop-the-Clock event business rules for each mailpiece to determine days in transit from acceptance to delivery. These data are aggregated to determine on-time percentages that appear in service performance reports. The logic to develop the service performance reports is developed by internal subject matter expert developers, and then verified in an internal peer review to be accurate. A data validation package is then created by the development team and approved by the Enterprise Analytics service performance management team to ensure data accuracy and appropriate implementation of business rules to ensure a correct service performance score is created.

e. The Seamless Acceptance and Service Performance (SASP) system integrates mailer manifest data and operational scan data to measure service performance of commercial mail. To ensure accuracy, reliability and representativeness of the data, automated alerts and manual verification processes have been implemented to ensure data flows are monitored and accurately feed into the service performance calculations. Exhaustive quality checks are then performed on the results of the service performance calculations and data aggregations used for reporting. This includes verifying the volume and percentage of mailpieces in measurement by mail class is in line with expectations compared to day of week and Same Period Last Year, reviewing

**RESPONSE OF THE UNITED STATES POSTAL SERVICE
TO CHAIRMAN'S INFORMATION REQUEST NO. 1**

RESPONSE to QUESTION 5 (continued)

mail volume exclusion and mailer data accuracy trends, and ensuring service standards are accurately assessed. Additionally, the service performance data is validated by the third-party system, Intelligent Mail Accuracy and Performance System, to ensure that scores are accurately computed and aggregated for use in reports provided to the PRC.